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EXAMINER

AFSHAR, KAMRAN

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RISHI MOHINDRA and PETRUS M. STROET

Appeal 2009-011666
Application 10/780,471
Technology Center 2600

Before THOMAS S. HAHN, ELENI MANTIS MERCADER, and
CARL W. WHITEHEAD, JR. *Administrative Patent Judges.*

HAHN, *Administrative Patent Judge.*

DECISION ON APPEAL¹

Appellant invokes our review under 35 U.S.C. § 134(a) from the final rejection of claims 1, 4-7, and 10-26. We have jurisdiction under 35 U.S.C. § 6(b). We affirm the Examiner's rejection of these claims.

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE" (paper delivery mode) or the "NOTIFICATION DATE" (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

STATEMENT OF THE CASE

Appellants claim a radio device and method for determining a received signal strength indicator (RSSI) by summing absolute values of received in-phase and quadrature signal components, with the summed components contributing “in equal proportion” as recited in all independent claims.² Claims 1 and 15 are illustrative (disputed limitations are emphasized):

1. A method of determining a received signal strength indicator signal from an in-phase signal component and a quadrature signal component of a low intermediate frequency signal that represents a received radio frequency signal, said method comprising:

determining a first absolute value from said in-phase signal component:

determining a second absolute value from said quadrature signal component:
and forming a sum of said first and second absolute values, wherein the in-phase signal component and the quadrature signal component contribute to the sum in equal proportion.

15. A method of determining a received signal strength indicator signal from an in-phase signal component and a quadrature signal component of a low intermediate frequency signal that represents a received radio frequency signal, said method comprising:

performing a limiting operation to obtain a limited in-phase signal component and a limited quadrature signal component; determining a first absolute value from said limited in-phase signal component; determining a second absolute value from said limited quadrature signal component; and
forming a sum of said first and second absolute values, wherein the limited

² See generally Abstract; Spec. 6:18-32; Figs. 2, 3.

in-phase signal component and the limited quadrature signal component contribute to the sum in equal proportion.

The Examiner relies on the following prior art references to show unpatentability:

Bodtmann	US 4,028,641	June 7, 1977
Gabato	US 5,603,112	Feb. 11, 1997
Chambers	US 5,901,347	May 4, 1999
Haartsen	US 6,081,697	June 27, 2000
Yoshizawa	US 6,311,049 B1	Oct. 30, 2001

The Examiner, under 35 U.S.C. § 103(a), rejected:

1. Claims 1, 4, 15, and 16 as unpatentable over Gabato and Bodtmann (Ans. 3, 4).
2. Claims 7, 13, 20, 21, and 25 as unpatentable over Gabato, Bodtmann, and Haartsen (Ans. 4-6).
3. Claims 5 and 17 as unpatentable over Gabato, Bodtmann, and Yoshizawa (Ans. 6).
4. Claims 10, 12, 14, 18, 22, and 23 as unpatentable over Gabato, Bodtmann, Haartsen, and Yoshizawa (Ans. 6-8).
5. Claim 6 as unpatentable over Gabato, Bodtmann, and Chambers (Ans. 7).
6. Claims 11, 19, 24, and 26 as unpatentable over Gabato, Bodtmann, Haartsen, and Chambers (Ans. 8).

APPELLANT'S CONTENTION

Appellants in the Appeal Brief group different claims in accord with the rejections under separate headings (Br. 12-16), but do not identify any separate claim(s) as being argued.

Initially, Appellants group claims 1, 4, 15, and 16 and identify that the claimed invention has in-phase and quadrature components summed “*in equal proportion*” (Br. 12, 13). Relying on this recited limitation, Appellants argue that Gabato is distinguished because the reference instead teaches that “the in-phase and quadrature components contribute to the sum [of these components] in vastly differing proportions” (Br. 12).

Appellants additionally contend that the Examiner's combination of Gabato and Bodtmann for finding teachings or suggestions for the disputed limitations is unsupportable because Gabato “relate[s] to an RSSI circuit used in a radio *receiver*” and Bodtmann “relat[es] to a radio *transmitter*” (Br. 13). This argument that the Examiner erred in combining Gabato and Bodtmann is repeated as the sole argument for all of the other grouped claims.

ISSUE

The pivotal issue, based on the Examiner's findings and conclusions and Appellants' contentions, is whether the Examiner, under § 103(a), erred in concluding that Gabato teaches or suggests determining an RSSI signal based on summing in-phase and quadrature components “in equal proportion” as recited in independent claims 1 and 15.

FINDING OF FACT

The following Finding of Fact is shown by a preponderance of the evidence.

1. Gabato discloses in the “Background of the Invention” section that RSSI can be calculated by taking the square root of the summation of the square of the absolute value of “I” (i.e., an in-phase component) and the square of the absolute value of “Q” (i.e., a quadrature component) (col. 1, ll. 16-38; Fig. 1, 2).

PRINCIPLE OF LAW

The scope of claimed limitations is determined by giving the terms in claims their ordinary and accustomed meaning while interpreting the claims as broadly as is reasonable and consistent with the specification. *See In re Thrift*, 298 F.3d 1357, 1364 (Fed. Cir. 2002).

On appeal, Appellants may rebut the Examiner’s findings and reasoning with opposing evidence or argument. Failure to do so may constitute a waiver of potential arguments. *See Ex parte Frye*, 94 USPQ2d 1072, 1075 (precedential) (BPAI 2010) (“If an appellant fails to present arguments on a particular issue — or, more broadly, on a particular rejection — the Board will not, as a general matter, unilaterally review those uncontested aspects of the rejection.”); *Hyatt v. Dudas*, 551 F.3d 1307, 1313-14 (Fed. Cir. 2008) (The Board may treat arguments appellant failed to make for a given ground of rejection as waived); 37 C.F.R. § 41.37(c)(1)(vii).

ANALYSIS

Obviousness Rejection of Claims 1, 4, 15, and 16

For the following reasons, Appellants' assertions are not persuasive that the Examiner erred in rejecting these grouped claims, because we do not agree that Gabato is deficient in teaching or suggesting determining an RSSI signal based on summing in-phase and quadrature components in equal proportion as recited in independent claims 1 and 15.

In the Examiner's Answer, the Examiner in response to Appellants' Appeal Brief, finds that Gabato "teach[es] the in-phase signal component and the quadrature signal component contribute to the sum used to form the RSSI indication *in equal proportion* (See Gabato e.g. I (Component) is fed into a squaring function block 201, and Q (Component) is fed into a squaring function block 203" (Ans. 9) (*italicized emphasis added*). The Examiner acknowledges that this finding is in response to the Appeal Brief and was made after a "further review of references" (Ans. 9).

We agree with the Examiner that Gabato teaches adding squared absolute values of in-phase and quadrature signal components to determine RSSI (FF 1).

Both the claim 1 and claim 15 disputed limitations substantively recite "forming a sum of said first and second absolute values, wherein the in-phase signal component and the quadrature signal component contribute to the sum in equal proportion."³ Using ordinary and accustomed meanings for

³ Claim 15 further recites that the in-phase and quadrature signal components are "limited." This additional recited limitation is not argued by Appellants as distinguishing over Gabato, and we, accordingly, address the

recited terms, we find that a broadly reasonable interpretation for the disputed limitations encompasses summing absolute values of in-phase and quadrature signal components and that this claimed summation does not exclude squaring of the signal components prior to summation as taught by Gabato (*see* FF 1). Further, we find this interpretation is consistent with our review of Appellants' Specification. *See Thrift*, 298 F3d at 1364.

Appellants argue that the disputed claim limitation for "equal proportion" distinguishes over Gabato's disclosed embodiment that includes scale factors (Br. 12). The Examiner, however, does not rely on that Gabato embodiment for the above discussed finding identified in response to Appellants' Appeal Brief (Ans. 9). For the foregoing reasons, we agree with the Examiner's finding that the disputed independent claim limitations read on the Gabato embodiment identified in the Examiner's Answer.

In view of our concurring with the Examiner concerning the disputed limitations reading on Gabato, we do not reach the Appellants' now moot argument that the Examiner erred in combining Gabato and Bodtmann to find teachings or suggestions for the disputed limitations (Br. 13).

We will sustain the rejection of independent claims 1 and 15. We will also sustain the rejection of the respective grouped dependent claims 4 and 16 that are not separately argued.

Obviousness Rejection of Claims 5-7, 10-14, and 17-26

Appellants separately group these claims according to the rejections, but collectively argue these claims, without separately identifying and

disputed limitations of claims 1 and 15 as being substantively identical. *See Frye*, 94 USPQ2d at 1075.

arguing any particular claim(s), by repeating the same argument.

Appellants' repeated argument is that the Examiner erred in combining Gabato and Bodtmann to find teachings or suggestions for the disputed limitations (Br. 13-16). For the reasons addressed *supra*, we concur with the Examiner concerning the disputed limitations reading on Gabato. Therefore, we do not reach the Appellants' now moot argument that the Examiner erred in combining Gabato and Bodtmann to find teachings or suggestions for the disputed limitations.

We, accordingly, will sustain the rejections of claims 5-7, 10-14, and 17-26.

ORDER

The Examiner's decision rejecting claims 1, 4-7, and 10-26 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(v).

AFFIRMED

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